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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,048	03/11/2004	Ross Stenfort	ADAPP271	8593

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EXAMINER	
RAHMAN, FAHMIDA	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/800,048	STENFORT ET AL.	
	Examiner	Art Unit	
	Fahmida Rahman	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This final action is in response to communications filed on 8/25/2006.

2. Claims 1, 9, 18 have been amended and no claims have been added or canceled. Thus, claims 1-20 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5, 6, 9, 11, 12, 13, 14, 18, 20 are rejected under 103(a) as being unpatentable over Chen (US Patent Application Publication 2005/0188123), in view of Umesh et al (US Patent Application No. 2004/0137952).

For claim 1, Chen teaches the following limitations:

An apparatus for controlling an alignment signal transmission ([0008] mentions that a system and method for inserting Interval Markers in a data stream is provided. Interval Markers are alignment signal, since they do not represent data but are required for data flow management) **in an electronic communication process** (100), **comprising: a counter** (buffer count BC in Fig 6) **configured to sequentially modify a count value in accordance with an associated clock signal** (BC changes with

respect to clock as explained in [0059]. Fig 6 shows the steps of changing BC. Thus, BC changes sequentially); **a storage cell configured to** (MO in Fig 6) **receive and store an alignment trigger value** ([0010] mentions that MO counter indicates the next location for insertion of Marker. Thus, MO stores alignment trigger value that triggers the system to insert alignment signal); **a comparator connected to receive the count value as an input from the counter and the alignment trigger value as an input from the storage cell, the comparator configured to compare the count value to the alignment trigger value** ([0059] mentions that BC and MO are compared with each other, which requires a comparator), **the comparator further configured to send an output signal from an output port upon comparison of the count value and the alignment trigger value** ([0059] mentions that an Interval Marker is inserted at clock cycle 2 when BC is greater than MO. Therefore, contents of registers shown in Fig 4 are rearranged based on comparison between MO and BC. Thus, comparison sends a signal to the system to rearrange the registers 402. [0049] shows comparison includes equivalence condition); **and alignment circuitry** (402 and part of 308 that generate and insert Marker FF) **connected to receive the output signal from the comparator** (contents of registers 402 shown in Fig 4 are rearranged upon based on comparison between MO and BC. Thus, comparison sends a signal to the system to rearrange the registers 402), **the alignment circuitry configured to generate and transmit an alignment signal to a target transceiver** (FF in Fig 6 is the alignment signal is transmitted to target system 104 with data) **in response to receipt of the output signal from the comparator** (FF is inserted when BC is greater than MO. [0056]-[0058]

and [0049]. The transmission occurs after the insertion of Marker in proper place. Thus, alignment signal is generated and transmitted in response to comparison between BC and MO), **wherein the alignment signal represents a dword** (FF is a dword) **to be ignored by internal logic of the target transceiver** (FF does not represent data. It only represents the boundary. Therefore, it is ignored in the data processing operation in target transceiver).

Although Chen compares count value with alignment trigger value and conditionally inserts Marker when BC=MO ([0056] mentions 514 state is for insertion of Marker and [0049] provides condition for transition to 514 that includes BC=MO), Chen's system also inserts Marker when BC and MO are not equal and Chen system sometimes does not insert marker for BC=MO. Although claim does not preclude generation of alignment signal when count value not equal to alignment value and does not require unconditional generation of alignment signal whenever BC=MO, Examiner cites Umesh et al that generate alignment signal based on equivalence of count value and alignment trigger value.

Umesh et al teach the following limitations:

a storage cell configured to receive and store an alignment trigger value (16);a comparator (14) connected to receive the count value as an input from the counter (Fig 5) and the alignment trigger value as an input from the storage cell (16), the comparator configured to compare the input from the counter to the input from the storage cell (Fig 5), the comparator further configured to

send an output signal from an output port upon equivalence of the input from the counter and the input from the storage cell (output of 14 is the input to 15); and alignment circuitry (combination of 11, 12 and 15) connected to receive the output signal from the comparator (15 receives output from 14), the alignment circuitry configured to generate and transmit an alignment signal (the directional beam generated according to antenna weight can be thought as an alignment signal, since it is used to align base station with mobile station) through an initiator transceiver (base station) to a target transceiver (mobile station) in response to receipt of the output signal from the comparator (the output of 14 is used to generate appropriate antenna weight that is used to adjust directional beam).

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine Chen and Umesh. One ordinary skill in the art would be motivated to have a comparator to compare count value with alignment trigger value and send output upon equivalence of count value with the alignment trigger value, since that depends on the design choice of the designer. Chen considers the equivalence criteria but it is not the sole criteria. One ordinary skill can choose a different design where alignment signal is generated upon equivalence of counter and trigger value.

For claim 3, BC counter of Chen resets to a new value and restarts counting when new data is loaded to 402 or data is transmitted from 402. Both operation depends on

Marker Insertion, which itself depends on comparison. Therefore, a signal from comparator is used to signal Block Counter to reset and restart when appropriate.

For claim 5, the process happens in initiator transceiver of Chen.

For claim 6, alignment trigger value MO has a component that represents number of transmission unit to be transmitted between each interval transmission ([0043] mentions MO depends on MI, which is the Marker Interval. Marker interval represents data transmission unit between alignment signal transmission).

For claim 9, Chen teaches the following limitations:

A method for controlling an alignment signal transmission ([0008] mentions that a system and method for inserting Interval Markers in a data stream is provided. Interval Markers are alignment signal, since they do not represent data but are required for data flow management) **in an electronic communication process** (100), **comprising: operating a counter** (buffer count BC in Fig 6) **configured to sequentially modify a count value in accordance with an associated clock signal** (BC changes with respect to clock as explained in [0059]); **selecting an alignment trigger value** ([0010] mentions that MO counter indicates the next location for insertion of Marker. Thus, MO stores alignment trigger value that triggers the system to insert alignment signal); **transmitting from an initiator transceiver to a target transceiver an alignment signal in place of transmission unit** (FF is transmitted from 102 to 104) **when count value equals the alignment trigger value** ([0059] mentions that an Interval Marker is

inserted at clock cycle 2 as BC is greater than MO. [0056]-[0058] and [0049]. The transmission occurs after the insertion of Marker in proper place. Thus, alignment signal is generated and transmitted in response to equivalence between BC and MO. [0049] shows comparison includes equivalence condition), **wherein the alignment signal represents a dword to be ignored by the internal logic of the transceiver** (FF does not represent data. It only represents the boundary. Therefore, it is ignored in the data processing operation in target transceiver).

Although Chen compares count value with alignment trigger value and conditionally inserts Marker when BC=MO, Chen's system also inserts Marker when BC and MO are not equal (Chen system sometimes does not insert marker for BC=MO). Although claim does not preclude generation of alignment signal when count value not equal to alignment value and does not require unconditional generation of alignment signal when BC=MO, Examiner cites Umesh et al that generate alignment signal based on equivalence of count value and alignment trigger value.

Umesh et al teach the following limitations:

a storage cell configured to receive and store an alignment trigger value (16);a comparator (14) connected to receive the count value as an input from the counter (Fig 5) and the alignment trigger value as an input from the storage cell (16), the comparator configured to compare the input from the counter to the input from the storage cell (Fig 5), the comparator further configured to

send an output signal from an output port upon equivalence of the input from the counter and the input from the storage cell (output of 14 is the input to 15); and alignment circuitry (combination of 11, 12 and 15) connected to receive the output signal from the comparator (15 receives output from 14), the alignment circuitry configured to generate and transmit an alignment signal (the directional beam generated according to antenna weight can be thought as an alignment signal, since it is used to align base station with mobile station) through an initiator transceiver (base station) to a target transceiver (mobile station) in response to receipt of the output signal from the comparator (the output of 14 is used to generate appropriate antenna weight that is used to adjust directional beam).

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine Chen and Umesh. One ordinary skill in the art would be motivated to have a comparator to compare count value with alignment trigger value and send output upon equivalence of count value with the alignment trigger value, since that depends on the design choice of the designer. Chen considers the equivalence criteria but it is not the sole criteria. One ordinary skill can choose a different design where alignment signal is generated upon equivalence of counter and trigger value.

For claim 11, trigger value of Chen can be any value.

For claims 12 and 13, [0049] of Chen shows the comparison. A comparator implementing comparison is therefore present.

For claim 14, BC counter of Chen resets to a new value and restarts counting when new data is loaded to 402 or data is transmitted from 402. Both operation depends on Marker Insertion, which itself depends on comparison. Therefore, a signal from comparator is used to signal Block Counter to reset and restart when appropriate.

For claim 18, Chen teaches the following limitations:

A method for controlling an alignment signal transmission ([0008] mentions that a system and method for inserting Interval Markers in a data stream is provided. Interval Markers are alignment signal, since they do not represent data but are required for data flow management) **in an electronic communication process** (100), **comprising:**

program instruction for selecting an alignment trigger value ([0010] mentions that MO counter indicates the next location for insertion of Marker. Thus, MO stores alignment trigger value that triggers the system to insert alignment signal);

program instructions for sequentially modifying a count value in accordance with an associated clock signal (BC changes with respect to clock as explained in [0059]);

program instructions for transmitting from an initiator transceiver to a target transceiver an alignment signal in place of transmission unit (FF is transmitted from 102 to 104) **when count value equals the alignment trigger value** ([0059] mentions that an Interval Marker is inserted at clock cycle 2 as BC is greater than MO.

[0056]-[0058] and [0049]. The transmission occurs after the insertion of Marker in proper place. Thus, alignment signal is generated and transmitted in response to equivalence between BC and MO. [0049] shows comparison includes equivalence condition), **wherein the alignment signal represents a dword to be ignored by the internal logic of the transceiver** (FF does not represent data. It only represents the boundary. Therefore, it is ignored in the data processing operation in target transceiver).

Although Chen compares count value with alignment trigger value and conditionally inserts Marker when BC=MO, Chen's system also inserts Marker when BC and MO are not equal (Chen system sometimes does not insert marker for BC=MO). Although claim does not preclude generation of alignment signal when count value not equal to alignment value and does not require unconditional generation of alignment signal whenever BC=MO, Examiner cites Umesh et al that generate alignment signal based on equivalence of count value and alignment trigger value.

Umesh et al teach the following limitations:

a storage cell configured to receive and store an alignment trigger value (16);a comparator (14) connected to receive the count value as an input from the counter (Fig 5) and the alignment trigger value as an input from the storage cell (16), the comparator configured to compare the input from the counter to the input from the storage cell (Fig 5), the comparator further configured to send an output signal from an output port upon equivalence of the input from

the counter and the input from the storage cell (output of 14 is the input to 15); and alignment circuitry (combination of 11, 12 and 15) connected to receive the output signal from the comparator (15 receives output from 14), the alignment circuitry configured to generate and transmit an alignment signal (the directional beam generated according to antenna weight can be thought as an alignment signal, since it is used to align base station with mobile station) through an initiator transceiver (base station) to a target transceiver (mobile station) in response to receipt of the output signal from the comparator (the output of 14 is used to generate appropriate antenna weight that is used to adjust directional beam).

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine Chen and Umesh. One ordinary skill in the art would be motivated to have a comparator to compare count value with alignment trigger value and send output upon equivalence of count value with the alignment trigger value, since that depends on the design choice of the designer. Chen considers the equivalence criteria but it is not the sole criteria. One ordinary skill can choose a different design where alignment signal is generated upon equivalence of counter and trigger value.

For claim 20, trigger value can be any value.

Claims 2, 10, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, in view of Umesh et al (US Patent Application Publication 2004/0137952), further in view of Sawafta et al (US Patent Application Publication 2004/0019432).

For claims 2, 10, 19, Chen, in view of Umesh et al do not explicitly mention that the threshold can be set through user interface. Sawafta et al's system sets trigger value through interface ([0058]).

One ordinary skill in the art would be motivated to change the system of Chen, in view of Umesh et al to set trigger through user interface, since that provide the flexibility of setting the threshold. Chen also suggests setting trigger ([0043] shows MO depends on MI and [0031] discusses setting of MI).

Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, Umesh et al (US Patent Application Publication 2004/0137952), in view of Martin et al (US Patent Application Publication 2005/0089012).

Chen or Umesh et al do not teach any delay circuit to compensate latency. Martin et al teach delay circuit to compensate latency ([0046] of page 4).

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine Chen, Umesh et al and Martin et al. One ordinary skill in the art would

have been motivated to compensate latency by including a delay circuit, since that would ensure accuracy.

Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, in view of Umesh et al (US Patent Application Publication 2004/0137952), further in view of AAPA.

For claims 7 and 16, Chen or Umesh et al do not explicitly mention that the communication process is performed in accordance to SAS or SATA protocol. Chen mentions that SATA is well known in the art ([0004]). One ordinary skill in the art would be motivated to implement the system of Chen, in view of Umesh et al in accordance to SAS or SATA, since SCSI and AT devices allows a number of peripheral devices to be attached. Chen system allows other specifications to be used ([0061]) besides SCSI. About dword and ALIGN primitive, applicant admits that these are requirements of SATA (lines 12-14 of page 8).

For claims 8 and 17, Chen teaches PHY.

Response to Arguments

Applicant's arguments with respect to claims 1-20 filed on 8/25/06 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the

PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fahmida Rahman
Examiner
Art Unit 2116

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SUPERVISORY PATENT EXAMINER
11/13/06